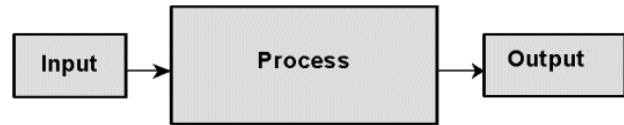


Introduction to Systems:

A System is a collection of interrelated sub systems which are working together to perform a specific task.

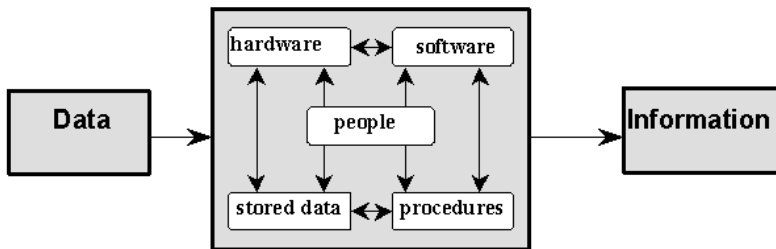
Basic Elements of a system:

- o Input
- o Process
- o Outputs



Manual Systems	Computerized systems
Flexible but slow	Not flexible but fast
Low cost	High cost but more accurate
Need more space and less security	High security and more backups
No power requirement	Need power
More errors	Less errors

Information system is a system with software, hardware, users, data, procedure or rules and networking to manage and to retrieve the information. www.64bits.lk



System Development Life Cycle (SDLC)

The System Development Life Cycle (SDLC) framework provides system designers and developers to follow a sequence of activities. It consists of a set of steps or phases to be followed sequentially to develop a system.

Main Phases of SDLC

➤ Identification of requirements www.64bits.lk

Requirement gathering techniques

- o Interviews
- o Questionnaires
- o Observations
- o Document analysis
- o Prototype

➤ Design the solution

- o Design the user interface
- o Design the database
- o Plan the test cases
- o Identification of software architecture
- o Identification of hardware
- o Identification of sub components

➤ **Coding the solution**

- Select the appropriate language
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➤ **Testing and debugging**

- Unit testing
- Integration testing
- System testing
- Acceptance testing

➤ **System deployment**

- Parallel deployment
- Direct deployment
- Pilot deployment
- Phased deployment www.64bits.lk

➤ **System maintenance**

- New errors
- New technologies
- New requirements

SDLC Models

Waterfall Model	Iterative and Incremental Model	Prototype Model	Spiral Model
<ul style="list-style-type: none"> ○ Each phase is completed before proceed to next ○ Simple and easy to use ○ Requirements must be fixed ○ Product can be seen after several months 	<ul style="list-style-type: none"> ○ System development can be initiated with available requirements ○ Each iteration add more functions ○ Requirements can be changed 	<ul style="list-style-type: none"> ○ This model is used if the requirements are not clear www.64bits.lk 	<ul style="list-style-type: none"> ○ This is very similar to the Iterative and Incremental Model but provide more attention on the risk analysis